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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,874	11/26/2003	David Bolt	01925- P0208A	1709
24126	7590	07/05/2006	EXAMINER	
ST. ONGE STEWARD JOHNSTON & REENS, LLC			WILHELM, TIMOTHY	
986 BEDFORD STREET			ART UNIT	
STAMFORD, CT 06905-5619			PAPER NUMBER	
			3616	
DATE MAILED: 07/05/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/722,874	<b>Applicant(s)</b> BOLT ET AL.	
	<b>Examiner</b> Timothy D. Wilhelm	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 38-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-06-2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 38-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulzyc et al (US 2002/0096840) in view of Deist (2,905,430) and in further view of Downey (2,544,448). Sulzyc et al disclose a system for controlling the distance between a vehicle axle and a vehicle comprising a height sensor 10, a level control valve 9 having a fill position, exhaust position, and an operating position, a controller 12 responsive to said sensor 10 and which controls the position of the level control valve 9 through control logic. Sulzyc et al disclose the present invention except for a housing including a wall that at least partially defines a chamber, said chamber including an inlet port, an operating port, and an exhaust port extending therethrough, and a movable plate with a side which is sealable against the wall by pressurized air supplied to the chamber. Deist discloses a control device for pneumatic suspensions including a level control valve 10 comprising a housing 11, in which is a movable plate 40, said valve 10 actuatable by rotation of said movable plate 40 between operating, fill, and exhaust positions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Deist's valve to Sulzyc et al's level control

system to allow for easy transitions between the fill, exhaust, and operating positions of the height control valve.

3. Sulzyc et al and Deist disclose the present invention except for a motor coupled to the valve. Downey teaches a motor operated valve in which an electric motor 17, comprising a worm gear 166 and coupled to a valve 10 via a valve shaft 11, rotates the valve 10 between positions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the actuator arm of Sulzyc and Deist's level control system with Downey's motor to give the controller more accurate control over the rotation of the valve plate.

4. Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulzyc et al, Deist, and Downey in view of Hovance (4,817,922). Sulzyc et al, Deist, and Downey disclose the present invention except for the height sensor being a transducer. Hovance teaches a suspension height control device in which the height sensor is a transducer, specifically an optical sensor 10. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Hovance's optical sensor to the vehicle level control device of Sulzyc et al, Deist, and Downey to give a more accurate reading of the vehicle height with relation to the axle.

5. Claims 56-68 and 71-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulzyc et al, Deist, Downey, and Hovance in view of Galazin (6,257,597). Sulzyc et al, Deist, Downey, and Hovance disclose the present invention except for a position sensor for sensing a position of an anti-creep device. Galazin

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teaches a suspension height control device comprising a position sensor 10 for sensing a position of an anti-creep device 12. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Galazin's position sensor and anti-creep device to the height control sensor of Sulzyc et al, Deist, Downey, and Hovance to keep the vehicle from creeping to an unsafe height.

6. Claims 50-51,69,70,75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sulzyc et al, Deist, Downey, Hovance, and Galazin in view of Miller (6,220,566). Sulzyc et al, Deist, Downey, Hovance, and Galazin disclose the present invention except for a feedback signal indicative of a position of the valve. Miller teaches a motorized valve controlled by a controller in response to a signal given by a sensor and which comprises a feedback signal indicative of the position of said valve. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a feedback signal in the motorized valve system of Sulzyc et al, Deist, Downey, Hovance, and Galazin to tell the controller whether the motor must be moved forward or in reverse.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. De Castelet (3,374,848) discloses a suspension height adjustment device comprising a valve with a rotatable plate 60. Glaze (4,373,744) discloses a suspension control system comprising a controller 28 and a transducer 30 acting as a height sensor. Iijima (4,647,069) discloses a vehicle suspension level

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control device comprising a height sensor 502, controller 500, and a motor 314. Kanoh et al (5,484,162) disclose a vehicle height control system including a height sensor 43, controller 39, and an electric motor 38 responsive to said controller. Kopczynski (5,797,607) discloses a vehicle suspension adjustment system that is controlled by a programmable logic controller 165. Lee (6,308,963) discloses a vehicle leveling valve device in which an electric motor 23 is coupled to a rotatable plate 3. Galazin et al (6,679,509) disclose a trailing arm suspension with a height control valve in combination with an anti-creep device in which the valve has three positions, said positions being fill, exhaust, and neutral. Stammreich (6,722,669) discloses an adjustable suspension system comprising a motor 176 with a worm gear 172. Schutt et al (6,991,239) teach a height sensor 40 for a vehicle height control system in which the sensor 40 is a transducer, said transducer including an optical bridge, a variable capacitor, or a flexible variable resistor. Plath (7,028,996) discloses a height control valve 12 for a vehicle suspension system comprising a housing 30 including a wall 36A that at least partially defines a chamber 36, said chamber including an inlet port 39, an operating port 38, and an exhaust port 40 extending therethrough and a movable plate 70 with a side which is sealable against the wall 36A by pressurized air supplied to the chamber;


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D. Wilhelm whose telephone number is 571-272-6980. The examiner can normally be reached on 9:00 AM to 5:30 PM Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TDW

  
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